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Title: MANGANESE ION REGULATION OF REVERSE TRANSCRIPTASE ACTIVITY AND METHODS OF MODULATING SAME

Abstract: Methods of identifying agents that modulate reverse transcriptase activity in a cell by affecting manganese ion transport across a membrane of the cell are provided, as are agents identified using such methods. Also provided are methods of modulating reverse transcriptase activity by effecting manganese ion concentration. In addition, methods of reducing or inhibiting infection of cells with a retrotransposable element are provided.

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INTERNATIONAL SEARCH REPORT

International application No.

PCT/US03/07879

A. CLASSIFICATION OF SUBJECT MATTER

IPC(7) : A61K 49/00; C12N 9/00; C12Q 1/00, 1/48, 1/68, 1/70
US CL : 424/9.2; 435/4, 5, 6, 15, 183

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

U.S. : 424/9.2; 435/4, 5, 6, 15, 183

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)
Please See Continuation Sheet

C. DOCUMENTS CONSIDERED TO BE RELEVANT

| Category * | Citation of document, with indication, where appropriate, of the relevant passages | Relevant to claim No. |
|------------|---|--------------------------------------|
| Y | US 6,255,062 B1 (CAMPBELL, J.L. et al.) 03 July 2001 (03.07.2001), Column 2, Lines 26-50; Column 7, Lines 10-18; Column 9, Lines 12-20; Column 9, Line 66 to Column 10, Line 3; Column 12, Lines 4-12; Column 20, Lines 29-40 and Column 20, Line 62 to Column 21, Line 29. | 1-9, 12-24, 31-48, 51-53, and 61-75 |
| Y | US 5,529,765 A (KINDT, T.J. et al.) 25 June 1996 (25.06.1996), Column 3, Line 57 to Column 4, Line 6; Column 8, Lines 27-54 and Column 9, Lines 26-44. | 9, 22, 28-31, 33-39, 43-44 and 59-60 |
| Y | US 5,773,592 A (Mills, R.L.) 30 June 1998 (30.06.1998), Column 1, Line 51 to Column 2, Line 14; Column 128, Lines 45 to 53 and Column 129, Lines 30-36. | 10-11 and 49-50 |
| Y | US 5,512,431 A (LOEB, L.A. et al.) 30 April 1996 (30.04.1996), Column 2, Lines 40-56; Column 3, Lines 46-56; Column 8, 16-33; Column 15, Line 59 to Column 16, Line 4; Column 18, Lines 10-30 and Column 19, Lines 10-34. | 16, 28-30, and 54-60 |
| Y | US 5,665,585 A (TORKKELI, T. et al.) 09 September 1997 (09.09.1997), Column 14, Lines 48-63 and Column 20, Lines 32-48. | 25-29 |

☐ Further documents are listed in the continuation of Box C.☐ See patent family annex.

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| "O" document referring to an oral disclosure, use, exhibition or other means | "&" document member of the same patent family |
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INTERNATIONAL SEARCH REPORT

PCT/US03/07879

Continuation of B. FIELDS SEARCHED Item 3:
BIOTECHNO, CAS, EMBASE, LIFSCI, MEDLINE, SCISEARCH

reverse transcriptase, E.C. 2.7.7.49., yeast, Saccharomyces, lymphocyte, mammalian, transposon, ATPase